

REMARKS

Claims 1-13 are pending in the present application. With entry of this Amendment, Applicants amend claims 1, 12 and 13. Reexamination and reconsideration are respectfully requested.

The Examiner rejected claims 1-8, 12 and 13 under 35 U.S.C. § 102(b) as being anticipated by Wagner et al. (US 5659172). The rejection is respectfully traversed.

The present invention relates generally to a pattern width measuring apparatus and method. The apparatus comprises an electron beam and first and second secondary electron detectors. The detectors detect secondary electrons generated when the electron beam is irradiated on the pattern. The apparatus further comprises first and second edge detectors. These detectors detect positions on the pattern based on the quantity of secondary electrons detected. Local minima of such quantities are used to determine the width. See, e.g., paragraphs 0051-52.

In contrast, Wagner does not disclose determining pattern width based on local minima of electrons detected. Wagner is directed to an apparatus for detecting wafer defects. A reference area and a base area are inspected by comparison and the result is cross-checked with another set of reference/base areas. Wagner discloses detecting an edge for a reference area and a base area in Col. 8, lines 2-10. The process applies an operator to each pixel of the image. Depending on whether the value of the operator exceeds a fixed threshold, a binary output pixel is set either as "0" or "1." The process accordingly detects an edge by analyzing each pixel separately. Wagner does not consider the pixels as a group to determine a local minimum. Thus, Wagner fails to disclose computing a pattern width "based on the position of the first local minimum and the position of the second local minimum detected by said first edge detector and said second edge detector respectively" as recited in claim 1. Accordingly, Applicants respectfully submit that claim 1 is not anticipated by Wagner.

Claims 2-8, which depend from claim 1, are not anticipated by Wagner for at least the reasons set forth above.

Claim 12 recites “computing a pattern width of the pattern based on the position of the first local minimum and the position of the second local minimum detected by said first edge detecting step and said second edge detecting step respectively,” and claim 13 recites “a pattern width computing section for computing a pattern width of the pattern based on the position of the first local minimum and the position of the second local minimum detected by said first edge detector and said second edge detector.” For at least the reasons discussed above, claims 12 and 13 are not anticipated by Wagner.

The Examiner rejected claims 9-11 under 35 U.S.C. § 103(b) as being unpatentable over Wagner in view of Shinada et al. (US 6172363). The rejection is respectfully traversed, including the Examiner’s statement of what is well-known in the art.

Claims 9-11 which depend from claim 1 include the recitation of claim 1 above. Wagner does not disclose this recitation, and Shinada does not make up for Wagner’s deficiencies. Shinada does not disclose measuring pattern width based on local minima. Accordingly, Applicants respectfully submit that claims 9-11 are patentable in view of Wagner and Shinada, either alone or in combination, because neither discloses computing a pattern width “based on the position of the first local minimum and the position of the second local minimum detected by said first edge detector and said second edge detector respectively” as recited in claim 1.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

If, for any reason, the Examiner finds the application other than in condition for allowance, Applicants request that the Examiner contact the undersigned attorney at the Los Angeles telephone number (213) 892-5630 to discuss any steps necessary to place the application in condition for allowance.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any

required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing Docket No. 514802002600.

Dated: August 6, 2004

Respectfully submitted,

By 

Mehran Arjomand

Registration No.: 48,231

MORRISON & FOERSTER LLP

555 West Fifth Street, Suite 3500

Los Angeles, California 90013

(213) 892-5200